

## **SECTION B: REMARKS**

This Amendment is responsive to the Office Action dated May 20, 2003 having a shortened statutory period for response set to expire on August 20 2003. Accordingly, the present communication is being timely filed.

In the above Office Action, Claims 1-2, 6-13, and 17-18 are rejected under 35 U.S.C. §103(a) as being unpatentable under Preece (6,126,557) in view of Hsu (6,302,806) and Kusumoto (6,306,047). Claims 14, 19-20, 24-34, 38-40 and 41 are rejected under 35 U.S.C. §103(a) as being unpatentable over Preece in view of Hsu. Claim 3 is rejected under 35 U.S.C. §103(a) as being unpatentable over Preece in view of Hsu and Kusumoto as applied to Claims 1-2, 6-13, and 17-18 above, and further in view of Takemura (6,273,830). Claim 4 is rejected under 35 U.S.C. §103(a) as being unpatentable over Preece in view of Hsu and Kusumoto (6,306,047) as applied to claims 1-2, 6-13, and 17-18 above, and further in view of Lezatte et al. (4,165,847). Claims 5 is rejected under 35 U.S.C. §103(a) as being unpatentable over Preece in view of Hsu and Beach et al. (6,309,309).

Additionally, Claims 21 and 35 are rejected under 35 U.S.C. §103(a) as being unpatentable over Preece in view of Hsu as applied to Claims 14, 19-20, 24-34, 38-40 and 41 above, and further in view of Takemura. Claims 22 and 36 are rejected under 35 U.S.C. §103(a) as being unpatentable over Preece in view of Hsu as applied to Claims 14, 19-20, 24-34, 38-40 and 41 above, and further in view of Lezatte. Claims 23 and 37 are rejected under 35 U.S.C. §103(a) as being unpatentable over Preece in view

of Hsu as applied to Claims 14, 19-20, 24-34, 38-40 and 41 above, and further in view of Beach.

**I. GENERALLY**

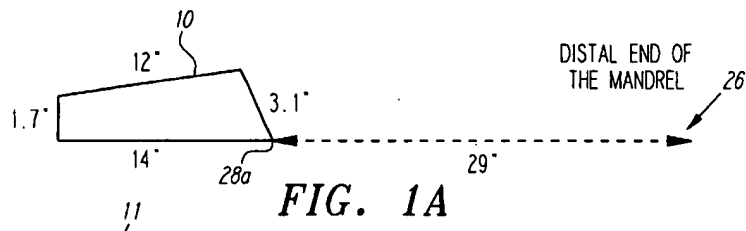
Applicant's attorney would initially like to thank the Examiner for considering the previous written communication of May 3, 2003, and for marking the above Office Action as non-final.

**II. FIRST REJECTION UNDER 35 U.S.C. §103(a) – BASE CLAIMS 19 AND 33**

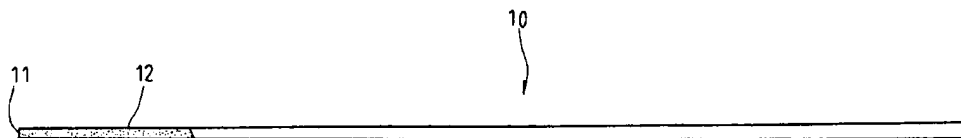
Claims 14, 19-20, 24-34, 38-40 and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Preece in view of Hsu.

Claim 14 has been canceled, without prejudice, in order to narrow the issues. Referring initially to Claim 19, the presently claimed invention includes, "a layer of metal-containing prepreg wrapped at a tip of the (golf club) shaft," and "a layer of non-metal fiber prepreg wrapped adjacent to the layer of metal-containing prepreg and throughout the shaft."

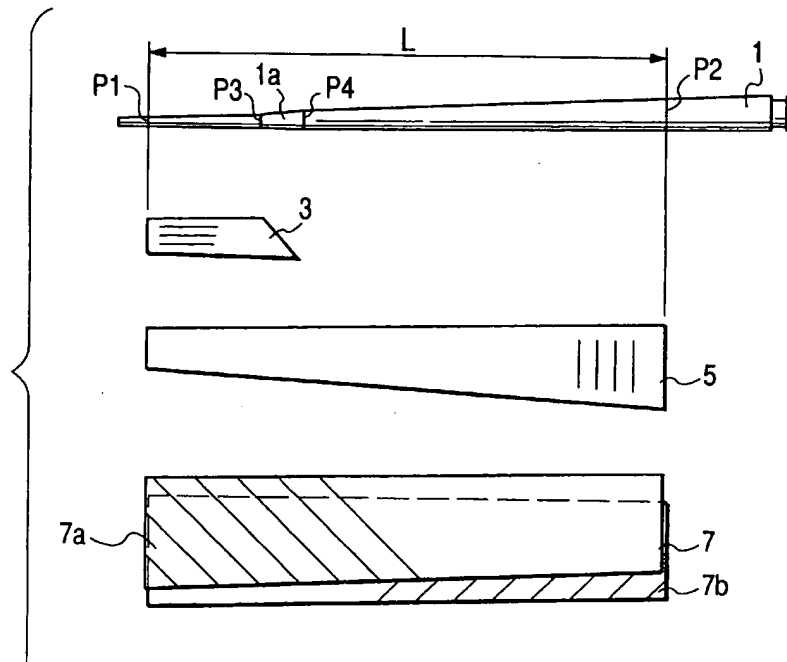
The primary reference, Preece, discloses a golf club shaft having a "loaded film" 10 that contains a metal "weighting agent" (col. 3, line 41), and wrapped at the butt end. Further, Preece teaches weighting the butt end of the shaft for the purpose of adjusting the weight and "balance point" of the shaft without altering the flexibility of the shaft. Also, the weighting agent used is metal powder.



Hsu teaches a golf club shaft that has a “weighted segment 12 formed of metal filaments on the outermost layer of the tip end 11.” (col. 1, lines 59-61). Similar to Preece, the added metal, in the form of filaments instead of powder in this case, is specifically for the purpose is of adding weight not provided by non-metal carbon fiber. (col. 1, lines 63-65). Not disclosed is the reinforcement at the tip of the shaft.



Kusumoto teaches a golf club shaft, reinforced with non-metal prepreg layers (e.g. prepreg sheets 7a and 7b) containing fibers, wherein the reinforcing fibers are oriented in oblique directions relative to the axis of the shaft.

**FIG. 1**

The rejection of Claim 19 in view of the combined teachings of Preece, Hsu, and Kusumoto is respectfully traversed.

It is always a complex question as to whether one of ordinary skill in the art of manufacturing golf club shaft could combine the references to arrive at the claimed invention. As a start, however, there must be a reason, suggestion or motivation to combine the references. A useful visualization, is to first picture the inventor as working in his shop with the prior art references, which he is presumed to know, hanging on the walls around him. Next, there must be a reason or motivation to pick these three references, among all the others, and combine their teachings and arrive at the presently claimed invention.

Whether there exists a reason, suggestion or motivation to combine references is a three part inquiry: 1) the suggestion may come expressly from the references themselves; 2) the disclosures are known to be of special importance in the field; or 3) the nature of the problem leads the inventors to the references leading to possible solutions.

Taking the first inquiry, there is no reason, suggestion or motivation contained in the references themselves. Importantly, none of the references speak to structure for both weighting and reinforcement at the tip of the shaft. The present inventor explicitly seeks to add weight to the tip of the shaft and, with the same material, to reinforce the tip of the shaft due to the material stresses caused by the weighted club head impacting a golf ball. None of the references address this issue. Additionally, none of the references use metal containing prepreg as structural reinforcement, but only as weighting mechanisms. The primary reference, Preece, in fact teaches away from any reinforcement or weighting at the tip (col. 3, lines 59-67).

○ But it is there HSW inherent

○ inherent

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col 2  
lns 22-33  
allows this

In the second inquiry, there is no evidence that the disclosures of the cited references are known to be of special importance in the fields. Even if they were, the state of the art suggests that there are many methodologies presently existing as to how to make golf club shafts. One could argue that even if there were a compulsion to combine these references, exactly how to combine them to solve the problem would be a non-obvious resolution. As to the third inquiry and as stated above, none of the references speak to using metal containing prepreg as reinforcement, and none of the references attempt to use metal-containing prepreg to reinforce a golf club shaft at the tip.

○ disagree Shows

○ HSW

In conclusion, many differences exist between the presently claimed invention and any individual reference. Hindsight obviousness is not the test and the determination is from a vantage point in time prior to when the claimed invention was made. There is no evidence of a motivation or suggestion to combine the three references, and arguably multiple motivations must be found to combine more than two references under 35 U.S.C §103(a). Applicant respectfully asserts that independent Claim 19 is non-obvious and patentable in its present condition. Further since Claims 20, and 24-32 depend either directly or indirectly from Claim 19, these claims are likewise allowable, both for their dependency and for the additional limitations recited therein.

Referring to Claim 33, it contains all of the above-discussed limitations of Claim 19, and additionally recites a metal containing prepreg having a "metal fiber"; and further wrapped at an innermost layer at a tip. None of the cited references anywhere disclose "an innermost layer at a tip." Moreover, Applicant respectfully asserts that Claim 33 is patentable for the same reasons as set forth for Claim 19 above. Further since Claims 34, 38-40 and 41 depend either directly or indirectly from Claim 33, these claims are likewise allowable, both for their dependency and for the additional sub-features recited therein.

*C obvious*

### **III. SECOND REJECTION UNDER 35 U.S.C. §103(a) – BASE CLAIM 1**

Claims 1-2, 6-13, and 17-18 are rejected under 35 U.S.C. §103(a) as being unpatentable under Preece (6,126,557) in view of Hsu (6,302,806) and Kusumoto (6,306,047).

Claim 1 has been amended to include first and second layers of metal-containing prepreg that are both adjacent to a non-metal fiber prepreg layer. This amendment is supported in the drawings in Figs. 8-10, and in the specification on page 4, paragraph [0051].

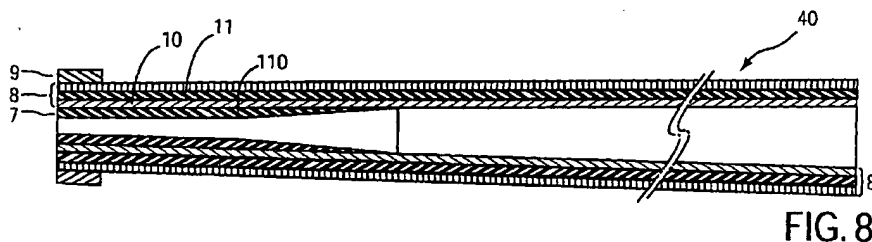


FIG. 8

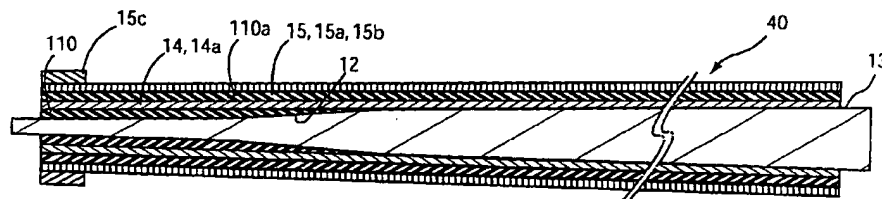


FIG. 9

None of the cited references disclose two metal-containing prepreg layers adjacent to a non-metal fiber prepreg layer, either individually, or in combination. Applicant respectfully asserts that Claim 1, as amended is in a patentable condition. Further since 6-13 depend either directly or indirectly from Claim 1, these claims are likewise allowable, both for their dependency and for the additional limitations recited therein. Claims 2, 17 and 18 are canceled herein, without prejudice.

**IV. THIRD REJECTION UNDER 35 U.S.C. §103(a)**

Claim 3 was rejected under 35 U.S.C. §103(a) as being unpatentable over Preece in view of Hsu and Kusumoto as applied to claims 1-2, 6-13, and 17-18 above, and further in view of Takemura (6,273,830). Since Claim 3 depends from Claim 1, this claim is allowable for its dependency, and the reasons set for the above, and for the additional sub-features recited therein.

**V. FOURTH REJECTION UNDER 35 U.S.C. §103(a)**

Claim 4 is rejected under 35 U.S.C. §103(a) as being unpatentable over Preece in view of Hsu and Kusumoto (6,306,047) as applied to Claims 1-2, 6-13, and 17-18 above, and further in view of Lezatte et al. (4,165,847). Since Claim 4 depends from Claim 1, Applicant respectfully asserts that this claim is allowable for the reasons set for the above and for the additional sub-features recited therein.

**VI. FIFTH REJECTION UNDER 35 U.S.C. §103(a)**

Claims 5 was rejected under 35 U.S.C. §103(a) as being unpatentable over Preece in view of Hsu and Beach et al. (6,309,309). Claim 5 has been canceled herein without prejudice.

**VI. SIXTH REJECTION UNDER 35 U.S.C. §103(a)**

Claims 21 and 35 are rejected under 35 U.S.C. §103(a) as being unpatentable over Preece in view of Hsu as applied to Claims 14, 19-20, 24-34, 38-40 and 41 above, and further in view of Takemura. Since Claim 21 and 35 depend from Claims 19 and 33



respectfully, Applicant respectfully asserts that this claim is allowable for the reasons set forth above and for the additional sub-features recited therein.

**VI. SEVENTH REJECTION UNDER 35 U.S.C. §103(a)**

Claims 22 and 36 are rejected under 35 U.S.C. §103(a) as being unpatentable over Preece in view of Hsu as applied to Claims 14, 19-20, 24-34, 38-40 and 41 above, and further in view of Lezatte. Since Claim 22 and 36 depend from Claims 19 and 33 respectfully, Applicant respectfully asserts that this claim is allowable for the reasons set forth above and for the additional sub-features recited therein.

**VI. EIGHTH REJECTION UNDER 35 U.S.C. §103(a)**

Claims 23 and 37 are rejected under 35 U.S.C. §103(a) as being unpatentable over Preece in view of Hsu as applied to Claims 14, 19-20, 24-34, 38-40 and 41 above, and further in view of Beach. Since Claim 23 and 37 depend from Claims 19 and 33 respectfully, Applicant respectfully asserts that this claim is allowable for the reasons set forth above and for the additional sub-features recited therein.

## VII. CONCLUSION

For the reasons set forth above, the presently claimed invention is patentably distinguished over the cited references and any combinations there from. Accordingly, the application is in condition for allowance and such action is respectfully solicited. Should any issues remain unresolved, Mr. Blau is encouraged to telephone the undersigned attorney.

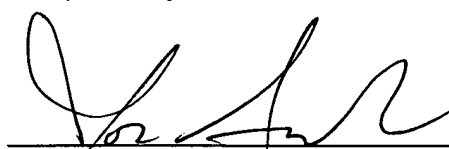
I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on July 30, 2003

by Angela Williams

Signature

July 30, 2003

Respectfully submitted,



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